

From glowbugs@theporch.com Thu Jan 23 12:46:05 1997
Return-Path: <glowbugs@theporch.com>
Received: from uro (localhost.theporch.com [127.0.0.1])
by uro.theporch.com (8.8.5/AUX-3.1.1)
with SMTP id MAA13843;
Thu, 23 Jan 1997 12:34:47 -0600 (CST)
Date: Thu, 23 Jan 1997 12:34:47 -0600 (CST)
Message-Id: <1.5.4.32.19970123112559.00fb1c60@165.247.88.2>
Errors-To: ws4s@infoave.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 424
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@theporch.com
Content-Type: text/plain; charset="us-ascii"
Mime-Version: 1.0
X-Mailer: Windows Eudora Light Version 1.5.4 (32)
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GLOWBUGS Digest 424

Topics covered in this issue include:

- 1) RE: 45 tubes..I shudda pulled em.
by "Brian Carling" <bry@mail1.mnsinc.com>
- 2) Re: BA/GB on 200 meters an' down tonite anyone????
by "Brian Carling" <bry@mail1.mnsinc.com>
- 3) Re: Is glowbugs the forum for this?
by "Brian Carling" <bry@mail1.mnsinc.com>
- 4) QRP-L
by "Brian Carling" <bry@mail1.mnsinc.com>
- 5) parts needed
by Jay Coward <jayc@hpcmr42.sj.hp.com>
- 6) Re: Is glowbugs the forum for this?
by Jeffrey Herman <jherman@hawaii.edu>
- 7) Re: QRP-L
by wmcshan@REX.RE.uokhsc.edu (Mike McShan)
- 8) Re: QRP-L
by No Data Available <earwax@indy.net>
- 9) WTB SCOPE
by leeboo@ct.net (Leon Wiltsey)
- 10) Re: QRP-L
by "Claton Cadmus" <aplitech@Spacestar.Net>
- 11) Re: Thoughts on cotton covered wire by the foot

by Bob Roehrig <broehrig@admin.aurora.edu>
12) WTB: loctal socket
by Scott Alfter <salfter@theonramp.net>
13) Re: QRP-L
by No Data Available <earwax@indy.net>
14) That thread
by "Brian Carling" <bry@mail1.mnsinc.com>
15) GLOWBUG QRG
by "Brian Carling" <bry@mail1.mnsinc.com>
16) Re: QRP-L
by "Brian Carling" <bry@mail1.mnsinc.com>
17) Re: tubes --- regenerate
by rdkeys@csemail.cropsci.ncsu.edu
18) Re: tubes --- regenerate
by rdkeys@csemail.cropsci.ncsu.edu
19) DCC wire
by Mike Warren <71555.713@compuserve.com>
20) Which HB?
by wmcshan@REX.RE.uokhsc.edu (Mike McShan)
21) BA/GB Topband Funzies
by rdkeys@csemail.cropsci.ncsu.edu
22) Re: Which HB?
by rdkeys@csemail.cropsci.ncsu.edu
23) Re: Which HB?
by jeffd@coriolis.com (Jeff Duntemann)
24) RE: Which HB?
by "James C. Owen, III" <owen@apollo.eeel.nist.gov>
25) Wee-Ceiver
by jeffd@coriolis.com (Jeff Duntemann)

Date: Wed, 22 Jan 1997 15:58:21 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@theporch.com
Subject: RE: 45 tubes..I shudda pulled em.
Message-ID: <199701222358.SAA19192@news2.mnsinc.com>

On 22 Jan 97 at 8:26, James C. Owen, III spoke about RE: 45 tubes..I
shudda pulled em. and said:
>... a heave with a sigh. I shudda pulled the tubes, I shudda pulled the
> tubes. I do know where they are buried. I shudda
> pulled the tubes. 73 Jim K4CGY

Jim, maybe you could erect a monument there and lay some flowers!

Date: Wed, 22 Jan 1997 15:58:22 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@theporch.com
Subject: Re: BA/GB on 200 meters an' down tonite anyone????
Message-ID: <199701222358.SAA19195@news2.mnsinc.com>

On 22 Jan 97 at 9:59, rdkeys@csemail.cropsci.ncsu.e spoke about Re:
BA/GB on 200 meters an' down to and said:

> It was a fellow in PA running a genuine 5 watt 6Y6 final vfo QRP rig
> on 160! I was surprised to even hear him at all. Kudos to a top
> band tube qrp GB fellow, even though I don't think he is on the
> list. Mebbe we should invite him.....
>
> Bob/NA4G

Bob & everyone"
Any time I QSO with a GB station I tell them about this list and
how to subscribe!

72.5 - Bry

*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
*** See the great ham radio resources at: *
** <http://www.mnsinc.com/bry/> *

Date: Wed, 22 Jan 1997 16:01:31 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@theporch.com
Subject: Re: Is glowbugs the forum for this?
Message-ID: <199701230001.TAA19802@news2.mnsinc.com>

I like what Jeff had to say on this!
75mW CW here I come! (later maybe!)

But seriously I would like to do POSITIVE Things to keep CW
alive and kicking too! ONE thing that we can do is encourage people
by providing information on the WWW.

Those of us that run a web site should consider making
a set of documents and articles available to people.

See you all on CW after a few days off here!

*** 73 from Radio AF4K / G3XLQ in Gaithersburg, MD USA *
** E-mail to: bry@mnsinc.com *
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** <http://www.mnsinc.com/bry/> *

Date: Wed, 22 Jan 1997 16:04:58 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: jherman@hawaii.edu
Subject: QRP-L
Message-ID: <199701230005.TAA19852@news2.mnsinc.com>

On 22 Jan 97 at 12:06, Jeffrey Herman spoke about Re: Is glowbugs the forum for this? and said:

> >It's appropriate for glowbugs only in that we (as homebrewers, of
> >whatever technology) represent in most cases the last thoroughly
> >nutso advocates of CW.
>
> Just a reminder that we're an offshoot of the QRP email list (the
> idea for our list originated on that list). There are about 2500
> subscribers to that list - it too is devoted to CW homebrewing (and
> kit building).
>
> 73,
> Jeff KH2PZ
>
> P.S. A few has asked how to subscribe to the Top Band list - send an
> email to topband-request@contesting.com and only write subscribe and
> you'll be hooked up!
>
>
BUT caveat emptor! IF you decide to get on the QRP list
you had BETTER watch your Ps and Qs or you will likely find yourself
BANNED for all time from that list! They are VERY strict and VERY
unforgiving!

You have been warned!

Date: Wed, 22 Jan 97 16:25:08 PST
From: Jay Coward <jayc@hpcmr42.sj.hp.com>
To: glowbugs@theporch.com

Cc: boatanchors@theporch.com
Subject: parts needed
Message-ID: <9701230025.AA08241@hpcmr42.sj.hp.com>

Greetings to the Group,

I'd like to build an adaptor such as that shown in the last issue of A.R.C. that uses a 1LA6 to replace the *rare* 1L6. To do a neat job I'd like to procure one "loctal" socket and one 7 pin plug that fits a standard 7 pin miniature tube socket.
Thanks,73, Jay

Date: Wed, 22 Jan 1997 14:28:29 -1000
From: Jeffrey Herman <jherman@hawaii.edu>
To: michael silva <mjsilva@ix.netcom.com>
Subject: Re: Is glowbugs the forum for this?
Message-ID: <Pine.GS0.3.93.970122140640.25377A-100000@uhunix5>

On Wed, 22 Jan 1997, michael silva wrote:

> wonder if low-power self-excited operation at the top of the BC band is
> feasible over a mile or so, both using the strict FCC guidelines and a
> slightly more liberal "don't bother anybody" approach? (I'm sure the
> FCC is just waiting to pounce on any 200 mW stations using 25'
> antennas, right?)

I did this with a buddy of my back in the (gad!) 60s. We found a circuit from one of those "100 Electronic Projects" type books for a tone-modulated CW xmtr. Finding a clear spot on the AM BCB in L.A. was difficult - ended up xmting on a weak Mexican stn (the tones sure were pretty to listen to (later I learned about harmonics generated from two frequencies beating together)).

We quickly found our range could be greatly extended by using long wire antennas....

I've recently rediscovered that same tone-modulated self-excited BCB CW xmtr. It's interesting how such a simple discovery can bring back a flood of fun memories.

Jeff KH2PZ

Date: Wed, 22 Jan 1997 18:40:34 -0600
From: wmcshan@REX.RE.uokhsc.edu (Mike McShan)

To: glowbugs@theporch.com

Subject: Re: QRP-L

Message-ID: <v01540b09af0c61b934ac@[157.142.56.167]>

>BUT caveat emptor! IF you decide to get on the QRP list
>you had BETTER watch your Ps and Qs or you will likely find yourself
>BANNED for all time from that list! They are VERY strict and VERY
>unforgiving!
>
>You have been warned!

The only thing that I have seen that results in removal from the QRP-L are personal attacks. The listowner is indeed inflexible about such events. But in general, almost any other sort of discussion seems to be allowed - even fairly heated ones (as long as they don't get nasty - check out the recent argument concerning conjugate matches in the QRP-L archives for an example of allowed exchanges that are fairly intense). No posts that I have read on the glowbug list would even remotely get you in hot water on QRP-L.

Just my observations.

BTW, glowbugs is the most informative list to which I subscribe. Great job everyone.

Mike N5JKY
Edmond, OK

Date: Wed, 22 Jan 1997 19:43:50 -0500 (GMT-0500)
From: No Data Available <earwax@indy.net>
To: Brian Carling <bry@mail1.mnsinc.com>
Subject: Re: QRP-L
Message-ID: <Pine.LNX.3.91.970122193606.14573A-1000000@trixie.qrp.com>

Brian,

I see you still can't keep from taking shots at the QRP-L. As far as I know you are the ONLY one banned from the list. You got what you deserved. Don't bother to reply with any of your condescending crap. I was just going to send this to you, but being as you posted yours to the list here you go!

73,

Charlie, N9NVV

Principal from BOS..."There's no problem so large it can't be solved by killing the user off, deleting their files, closing their account and reporting their REAL earnings to the IRS." earwax@indy.net

On Wed, 22 Jan 1997, Brian Carling wrote:

> On 22 Jan 97 at 12:06, Jeffrey Herman spoke about Re: Is glowbugs the
> forum for this? and said:
>
> > >It's appropriate for glowbugs only in that we (as homebrewers, of
> > >whatever technology) represent in most cases the last thoroughly
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> > Just a reminder that we're an offshoot of the QRP email list (the
> > idea for our list originated on that list). There are about 2500
> > subscribers to that list - it too is devoted to CW homebrewing (and
> > kit building).
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> > 73,
> > Jeff KH2PZ
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> > P.S. A few has asked how to subscribe to the Top Band list - send an
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> >
> >
> BUT caveat emptor! IF you decide to get on the QRP list
> you had BETTER watch your Ps and Qs or you will likely find yourself
> BANNED for all time from that list! They are VERY strict and VERY
> unforgiving!
>
> You have been warned!
>
>

Date: Wed, 22 Jan 1997 21:10:56 -0500 (EST)
From: leeb00@ct.net (Leon Wiltsey)
To: GLOWBUGS@theporch.com
Subject: WTB SCOPE
Message-ID: <199701230210.VAA02994@blue.ct.net>

LOOKING FOR ANY OLD OSCILLOSCOPE.
NOTHING FANCY JUST CHEAP.
AM RETIRED SEMIDISABLED SENIOR.
Thank the good LORD for all that you have!!!

Leon B Wiltsey jr. (Lee)

67yr old semi disabled senior
(stroke got my balance)
play keyboard and sing
music 1920's to 60'
none of the 90's noise

Date: Wed, 22 Jan 1997 20:01:45 -0600
From: "Claton Cadmus" <aplitech@Spacestar.Net>
To: "Multiple recipients of list" <glowbugs@theporch.com>
Subject: Re: QRP-L
Message-ID: <199701230202.UAA14075@Spacestar.Net>

Could we please stop this thread now, it serves no Glowbuggian purpose.

Brian, it is wrong for you to use this forum in this way. Your, mine and anyone else's opinion of the justification of your expulsion from the QRP-l doesn't mean a thing. The listowner determined you went over the line. That is and was the listowner's business alone. However, you may be able to take some solace in the fact that, as of today, you are no longer in the singular.

73 de Claton KA0GKC

Date: Wed, 22 Jan 1997 20:50:37 -0600 (CST)
From: Bob Roehrig <bproehrig@admin.aurora.edu>
To: rdkeys@csemail.cropsci.ncsu.edu
Cc: Multiple recipients of list <glowbugs@theporch.com>
Subject: Re: Thoughts on cotton covered wire by the foot
Message-ID: <Pine.ULT.3.95.970122204546.29108A-1000000@admin.aurora.edu>

On Wed, 22 Jan 1997 rdkeys@csemail.cropsci.ncsu.edu wrote:

> Can anyone find out where the fone company was getting theirs?

Back when I worked for Western Electric, we had two kinds of single

strand wire that was popular in our shop. I believe both were about 20 or 22Ga. One was plastic covered and one was cloth covered. They were called "BW" and "BU" (can't remember which was which). Seems to me they were made in a W.E. plant somewhere. I know that if they sat around too long, the insulation would have some kind of reaction with the wire and the stuff was shipped back to our smelting & refining plant for recycling, because the solderability went to heck.

E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI
CIS: Data / Telecom Aurora University, Aurora, IL
630-844-4898 Fax 630-844-5530

Date: Wed, 22 Jan 1997 21:12:54 -0800
From: Scott Alfter <salfter@theonramp.net>
To: Glowbugs Mailing List <glowbugs@theporch.com>
Subject: WTB: loctal socket
Message-ID: <32E6F356.78B5DF86@theonramp.net>

I found a couple of loctal tubes (a 14F7 and a 14A7) in a swap-meet parts bag a while back and figured that the 14F7 (a twin triode) would work nicely in a regenerative receiver project. The only loctal socket I have at this time is the one in my tube tester, and I don't intend to pull that apart for a project! :-). Rather than pick up extra parts to meet AES's minimum, I figured somebody probably has one in a junkbox. I'd be more than willing to pay for shipping and for the time you need to dig the part out of your collection...say, \$4 or so. If you have a loctal socket to spare, email me (no need to clutter the list further) and we'll talk. Thanks!

--

 /
 / v \
(IIGS(Scott Alfter (salfter@theonramp.net)
 _ ^_

Date: Thu, 23 Jan 1997 07:30:34 -0500 (GMT-0500)
From: No Data Available <earwax@indy.net>
To: Conard Murray <ws4s@InfoAve.Net>
Subject: Re: QRP-L
Message-ID: <Pine.LNX.3.91.970123072354.14573D-100000@trixie.qrp.com>

Conard and the group,

This is an apology for blasting Brian on the list. That was wrong of me.

73,

Charlie, N9NVV

Date: Thu, 23 Jan 1997 05:44:15 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@theporch.com
Subject: That thread
Message-ID: <199701231344.IAA03098@news2.mnsinc.com>

Claton is right.

I apologize to everyone for the post about that topic, and wish to see the thread end also. The topics discussed here on GB are near and dear to my heart, and I agree with Mike N5JKY 100% that GLOWBUGS is simply the best most informative group out there.

ON TOPIC comment:

Has anyone else here built the T-210 transmitter that was described in the January 1973 issue of CQ magazine? (pp 38-42)

It likes QUITE a GB!

Regards to all - Bry

Date: Thu, 23 Jan 1997 05:44:16 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: glowbugs@theporch.com
Subject: GLOWBUG QRG
Message-ID: <199701231344.IAA03108@news2.mnsinc.com>

I will be active on the GB/BA frequency of 7050 kHz most of the day today. I am on vacation. SO if any of the retirees among us is going to be active, give a listen for the 4 watts of RF emanating from AF4K in Maryland.

73 to all.

Bry

Date: Thu, 23 Jan 1997 05:44:15 +0000
From: "Brian Carling" <bry@mail1.mnsinc.com>
To: earwax@indy.net
Subject: Re: QRP-L
Message-ID: <199701231344.IAA03111@news2.mnsinc.com>

On 23 Jan 97 at 6:31, No Data Available spoke about Re: QRP-L and said:

> Conard and the group,
>
> This is an apology for blasting Brian on the list. That was wrong
> of me.
>
> 73,
>
> Charlie, N9NVV

I haven't read it yet (which may be good!)
So, apology accepted in advance, and I respect you for doing the above.

This is what we try to teach our children - that it is MUCH more important to apologize afterward and to make up after a spat, than to have never done it in the first place.

Yes, ideally we never misbehave, but when we do, it is important to apologize and commit to stopping it. Getting along well is a great trait of most radio amateurs, and that is why I still consider it the world's greatest fraternity.

Charlie - see you on the BA, GB and QRP frequencies.

73, Brian

Date: Thu, 23 Jan 1997 12:02:37 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
To: sigcom@juno.com (Stephen M Smith)
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com
Subject: Re: tubes --- regenerate
Message-ID: <9701231702.AA129190@csemail.cropsci.ncsu.edu>

>
> Hey BA Bob,
>
> What about those "peanut" tubes, you know, the ones that are about an
> inch long and 3/8 inch wide with the wire leads? I think they have 1.5
> Volt filaments. Think they would work for a miniature "spy" regen set?
> I thought it would be neat to build one into one of those Altoids tins
> that the QRP-L guys are so wound up about. (I did build a s/state
> transmitter into a Sucrets tin when I was a kid.)

Peanut tubes would work fine. I have a few that I thought I might try that same thing someday. I like the 6000 series tubes that are indirectly heated cathode tubes. The filamentary types like a 1AD4 might be a bit more tricky to use effectively, although they will work well. I have not tried many of them, since I prefer something I can see and get my soldering copper around without nuking it....(:+}}.....

> Also, I wrote you about some regen ideas a week ago or so (when the
> reluctant regen thread started) but I guess the mail got lost.

Hmmmm... maybe....

> The only regen schematic I have is from the book that got me started in
> radio, called "The Boys' First Book of Radio and Electronics" (talk about
> not P.C.!) by Alfred Morgan, 1954. There are plans for a one tube regen
> set in there that I apparently had planned to build (all kinds of marks
> and notes in the margins in my grade school handwriting) but never did.
> I thought maybe it would be a good way to use that UY227 that I found.
> My question is: That circuit uses a pot for regen control. Is that
> "cool" or no? I notice that most of the posts here reference a capacitor
> for the regen control. Thanks for your help.

Sounds good. I remember doing exactly the same thing, but had to settle for the xtal sets, cuz I could never afford a tube and the associate parts (was off chasing model airplanes too much then).

A 1 tube regen set is mostly pushing the limit of a usable receiver. If you put some sort of outboard audio to it, it should do fine. A 27 is a very hot regen detector with about 48 volts on the plate. Use a 10 meg ohm grid leak and a 10-20pf grid capacitor and it is second to none as a very hot and sensitive regenerative detector. One of my finest regens uses that tube. But, I use a pair of them and choke couple the audio to a second 27 tube. The type 76 tube is a direct 6 volt sub for the 27 that works very well also. The choke value is anywhere from 1 to 1000 henries, and is entirely uncritical. A 0.1 to 1 ufd coupling cap works fine.

The 1 tube set will work just fine on reasonably strong signals, tho,

and is well worth the effort to make a good one. The headfone gain is not great, even with 5K ohm fones, but it is usable on s7 and above signals. Remember that the early regen tuners were usually 1 tube sets. But, they generally had an effective range of 100 miles with spark sets. Only when the added gain of an outboard audio stage (commonly found on the classic IP-501 and SE-1400 series receivers of the late teens and early 20's. By 1925, everyone was using at least one audio stage. The classic example of this, commercially is the IP-501A receiver which put the detector and two stages of transformer coupled audio inside the case with the tuner, so that a clean all-in-one rx was had. More than two audio stages, transformer coupled or choke coupled is probably not needed, and will be very difficult to control and keep from motorboating at the transformer or choke resonant frequencies.

The use of a potentiometer for regeneration control in a triode tickler circuit is a less than optimal way to handle the regeneration control. It will work, but a standard throttle condenser and rf choke is a MUCH more satisfactory approach, and less prone to scratchi effects in the tin cans. The reason for using the potentiometer is strictly a cost thing. The throttle condenser functions much better in my hands and from what I have read from the literature.

If I had to pick any ONE tube to use in a regenerator, out of all the different things I have used, from rare WWI VT-1's to 12AT7's, I would use the '27 tube in a detector and two-step transformer coupled audio receiver, run on DC filament and 48vdc plates. The second best tube would be the '76 triode which is a direct sub with a 6 volt filament. The filament emission on the '27 is outrageous, and it makes a very robust detector that is easy to control.

IF I had to design a good 1 tube receiver, from scratch, it would be something like this:

- 1) A '27 or '76 tube for the detector running 48 volts to a maximum of 72 volts on the plate (72 is pushing for good control and I find 48 is about optimum).
- 2) A grid leak of 10 meg ohms to 100 meg ohms (10 meg ohms minimally as a common value, but if you have any of those precious Victoreen glass megohm resistors in the 50 or 100 meg ohm range, they are magnificent as grid leaks).
- 3) A grid capacitor using a glass capacitor of 10pf value. If that was not available, a single plate variable that would give about 10pf would be a good substitute.
- 4) A 4 prong plug in coil of my own design using clear or black (for a good period look it emulates bakelite very well) acrylic tubing

on a similar acrylic base (1/4 inch sheet about 3 inches square)
on a similar socket base (same 1/4 inch sheet acrylic) and using
banana plugs and jacks (drilled from a 1/8 inch steel template
for permanent hole positioning if I wanna make a dozen of these
plug in coil forms). Coils for 600M, 160M, 80M, 40M, 30M.
Coils wound with No. 14 solid wire for stability.

- 5) Sockets on the tubes to be good ceramic transmitting 5 pin sockets.
- 6) Throttle condenser of 250pf to 365pf with double bearings and ceramic insulation. A good transmitting vfo cap would do.
- 7) Main tuning condenser of 25pf to 35pf (a good single plate transmitting variable, with a good velvet vernier dial or a GenRad 10 inch round plate edgedriven dial (Yeah, I know I am dreaming). The velvet vernier should be the large 6 inch N size (also scarce as hen's teeth).
- 8) Antenna coupling would be by a single turn link around the base of the coil for low impedance to a series coil and capacitor for making a decent series antenna tuning network or an L network by picking the appropriate antenna connect point and grounding the capacitor.
The proper tuning of the input circuit to a regen detector is a must for good selectivity and overload protection. As an alternate, a single plate 10pf cap variable would allow a high impedance feed to the grid circuit, where a several turn wrap gimmic coupler would feed the variable to the grid circuit. LOOSE coupling in all inputs.
- 9) A good 2.5mh pie would rf choke would be used after the throttle condenser.
- 10) A good 3:1 audio coupling transformer would be used to couple to the first and second audio stages.
- 11) The audio output would be via RF choked and bypassed leads to the tin cans. An alternate would be a standard audio output transformer to a low impedance headset with a 1 uf coupling capacitor to high impedance tin cans.
- 12) The whole set would be in an aluminum box 17 inches wide, and about 1 foot square (high and deep) on a 19 inch panel with mounting in an old style cherry wooden box cabinet in the manner of the SE and IP-500 series receivers of the early days (Yeah, that is me perk).

Wiring would be done with large wire (probably my favorite black no. 14 household wire that I use for almost everything and that is available at any home depot type biggie hardware store in 500 foot rolls). Solidity of construction and mounting of parts would be the goal, with it looking like a 100 watt transmitter sort of construction rather than

the usual scratch-built regennie sort of thing.

That sort of design, I would consider a cadillac homebrew regennie. If the thing was sans audio stages, I would make room to add them later. With this as a single tube detector tuner receiver, it would have a relatively good basic design that should give good service on a well designed antenna or a long wire. With the addition of the audio stages, it should work on anything from a 6 foot wire to the sky is the limit.

I left out variable link coupling from the primary antenna circuit to the secondary grid circuit. If I had a machine shop to properly do a good set of coils with a variable link system, that would be worth considering. But, in the average use, that is probably a bit much for the average constructor to have to do, reliably and well. The biggieboyz receivers like the SE and IP-500 series receivers from WWI and the 20's all had variable link coupling. By the time the late 20's had rolled around and the RCA AR-1496 (the epitome of classic regen receivers of the middle period --- 1925-1935) was out, it was far ahead of anything else in its era. If you want to study a good late 20's regen receiver, study the RCA AR-1496. It was not surpassed until RCA brought out the RAL in 1936 or so. By the time the RAL was out, variable link coupling was dropped in favor of rf gain control. If you don't have rf gain control, then some sort of variable link or a minimal link or a variable capacitor input will do well. In my hands the single turn link works well, and is easy to do.

73/ZUT DE NA4G/Bob UP..... and good regenerating!

Date: Thu, 23 Jan 1997 14:21:10 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
To: sigcom@juno.com (Stephen M Smith)
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com
Subject: Re: tubes --- regenerate
Message-ID: <9701231921.AA129522@csemail.cropsci.ncsu.edu>

> The peanut tube receiver would just be for laughs, not anything serious.
> Just a fun conversation piece that works.

There was an interesting thing called the ``Wee-Ciever'' in one of the lesser ham rags about 1970 or so that used a 3V4 tube on a Sucrets(tm) lozenge tin box. I always thought something like that might be neat for a peanut tube. Likewise, the opposite extreme might be a HUGE breadboard thing with a set of components GROSSLY oversized for looks and the tube buried in a tiny wooden box about 2 inches cubed or an upturned pill bottle or something like that that was opaque, so you

could not see it.....(:+}}, then let the non-glowus-bottlus folks have a lookie see at it and try to find the vacuum tube.....(:+}}...

> What got me interested in this regen thing was your comments that a
> properly designed and operated regen set is very sensitive and selective
> (I think you said something about able to slice the sidebands from an SSB
> signal?). And I wanted a simple receiver that would go along with The
> Scrounger and my other GB transmitter for a complete GB station (I have
> to use a s/state receiver now).

Yes, properly uncoupled and that includes a light grid load on the tuned circuits, a regenerative detector can slice sidebands right off. You have to hear it to appreciate it. The signal bandwidth starts off at several Kcs, and as you roll the regeneration off to the ragged edge, you can hear the bandwidth get so narrow that it rings at about 200hz or less. Puny rock filters move over! If you DON'T hear that audio bandwidth narrowing, you don't have good Q in the detector tuned circuits, for whatever reason. The RAL does it nicely, the Mackay 128AY does it nicely, and most of my sets will do it well, but some are better at it, and my best looking period set (1925) is only so-so at it (using old coil forms and sockets may be the culprit -- tradeoffs for periodicity). My ugliest looking set using the '27 tubes in the detector and one step with choke coupling on low-loss lucite material with good ceramic insulation will easily slice sidebands with the best of them.

For general ham use, I would recommend at least one audio stage after the detector (known classically as a ``detector and one-step''). That usually will provide ample headfone volume in tin cans to hear the dx quite well, on a good antenna. The use of a second stage of audio is good for blowing the tin cans off yer noggin, and will make most all signals quite loud. That is transformer or choke coupled. You can use resistance coupling, but I have not tried that but one time and although it worked, it was so broad on the audio that you could hear everything from DC to light through it (I tried it on a dead-bug-fetitis printed circuit board regen set that I built one time --- pennance to the fire deamons). Makes one appreciate real glow bottles with real transformer iron and real coils therewith.

> So, I have decided to use the UY227 as the detector and whatever I can
> scrounge for the audio amp.

I would use two five-pin sockets and plan for a pair of 27's or 76's. If you need to use other tubes, it is a simple matter to take a plain 7/8/9 pin socket and wire it up in a dud 5 pin tube base as an adapter for all kinds of tubes for testing and playing.

> I got a terrific set of high impeadance

> magnetic 'phones from Ray Mote (even more impetus to get going here)
> along with some 243 crystals for The Scrounger. I'm not going to go for
> a period reproduction, just a receiver that works well on 80 and 40 and
> maybe 160 also.

OK, that should do well. For easy construction use a 10h choke and a
1ufd coupling capacitor to the audio tube....cheap and easy. You can
put the tin cans in the audio output lead if the voltages are kept
reasonable (72 volts or less) or use a second choke and capacitor for
output coupling at dc-zero potential.

> I think I'll use the variable(s) out of an ARC 5
> transmitter hulk I have and the output tank coil too.

The arc-5 variables are probably too big, except for use in the antenna
tuning primary circuit and as the throttle condenser. Try to keep the
grid loaded with less than 50pf to ground in its tank circuit, if possible.
That will keep the highest circulating voltage present, and help make
the detector somewhat more sensitive.

> That ceramic form
> will be real stable and the rotating link would probably be good for the
> antenna coupling too, don't you think?

That would do well for the antenna tuning section, although almost any
sort of tapped coil and capacitor will probably work satisfactorily.
The idea is merely to tune the primary circuit to resonance, and loosely
couple into the secondary circuit.

> right on the old ARC chasis, simplifies the mechanicals, good shielding
> too . (Hmmm....I *could* use a 1625 for the detector....hmmm....(stop
> him, he's going to jump!)).)

I have used 6L6's as detector and 1 step and it works just fine,
although the radiation out of it was much higher than with the normal
receiving tubes. Steve Linscott used an 833 kilowatt triode in a
regenerative detector just to demonstrate that it could be done.
It worked pretty well, in fact. (Steve wanna comment more?)

Actually the bigger the tube oscillator in regenerative detectors,
the more stable and less subject to pulling it becomes, at the
expense of radiating a whole lot more.

> Couple more questions: I assume by "two step" you mean two stages of
> audio, correct? Where can I find diagrams of those RCA receivers that
> you mentioned?

Yes a step for each audio tube. Classically:

Detector set	detector tube only (rare after 1925)
Detector and one step	detector tube and 1 audio tube stage (common)
Detector and two step	detector tube and 2 audio stage tubes (common)
Detector and three step	detector tube and 3 audio stage tubes (rare)

Note: President Harding's set from the Navy was a detector and 3 step.
(trivium regeneratum for the day)

The RCA AR-1496 receiver is discussed and the diagram and fotos are in the Duncan and Drew, 1931, Radio Telegraphy and Telephony, pages 890-892 in the chapter on Radio Aviation. Also in that chapter is the granddaddy of the famous BC-191/BC-375 MOPA transmitter supposedly designed by GE. If you look closely at the RCA ET-3653-A aircraft transmitter, you will find that it is a perfect clone of the GE BC-191/BC-375 transmitter MOPA design, except that it PREDATES the GE design by 5 years. I wonder who was copying whom, back then.....(:+{}..... Also, there is almost a whole chapter on the commercial marine regenerative receivers of the IP-500 series, complete with diagrams and operating instructions, etc. That is more good regenie info.

Much of the above is also to be found in Sterling's Radio Manual, 1st and 2nd editions, 1927 and 1928, and some in the later 3rd editon, about 1935.

73/ZUT DE NA4G/Bob UP

Date: Thu, 23 Jan 1997 07:20:47 -0500
From: Mike Warren <71555.713@compuserve.com>
To: John? <rdkeys@csemail.cropsci.ncsu.edu>
Cc: ba-list <boatanchors@theporch.com>
Subject: DCC wire
Message-ID: <199701231251_MC2-FCA-7CE1@compuserve.com>

I must have missed the original post somehow, but I gather you are looking for DCC wire. Here are a couple of sources I found:

1. MIDCO, PO Box 2288, Hollywood, FL 33022
DCC, 100 foot lengths, in 20, 22, 24, 26 and 28 gauge.
The 28 gauge is \$2.40; the 20 gauge is \$7.90. Others are in between.
2. Modern Radio Labs, PO Box 14902, Minneapolis, MN 55414-0902
#22 DCC, \$.03 per foot "up to 500 feet maximum" (don't know what that

means!)

73,

Mike W5MAZ

Date: Thu, 23 Jan 1997 12:04:46 -0600
From: wmcshan@REX.RE.uokhsc.edu (Mike McShan)
To: glowbugs@theporch.com
Subject: Which HB?
Message-ID: <v01540b01af0d58141996@[157.142.56.167]>

Hi,

I have the opportunity to get a copy of either the 1958, 1960, or 1965 ARRL Handbook...any thoughts out there about which is the best for glowenbuggen ideas/circuits?

Thanks for any input and 72/73,

Mike N5JKY
Edmond, OK

Date: Thu, 23 Jan 1997 14:40:30 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
To: glowbugs@theporch.com, boatanchors@theporch.com
Cc: rdkeys@csemail.cropsci.ncsu.edu ()
Subject: BA/GB Topband Funzies
Message-ID: <9701231940.AA129603@csemail.cropsci.ncsu.edu>

I feel an attack o' de ol' Topbanditis, recurring, 'ere.

Fer tha rest o' the week an' tha weekend, lets inhabit, pending a rabid contest invasion (it's not this weekend is it?), lets fire up de ol' ether on the BA/GB QRG o' 1802R500 +- yer tolerances on the rocks, vfo's or self controlled oscillators. It is supposed to cool down some, I hear, and that might make fer some fine time on watch fer all them thar glowbottle burners. Any time betwixt 0000Z and 0600Z should be fine..... just tune up and give the usual BA/GB call..... CQ BA CQ BA DE yourcall K, and see if anyone be about. Nuttin' formal, jes arrives there an join in on tha fun an' cammaraderie.

If any contest should be there, jus QSY UP to 3579R545, an keeps a'goin.
Try ta stay low on 3579 betwixt 9 and 10 pm est, since our QRP brethren
are running something there, over then next month or so.

Fires ye up yer bottleburners!

73/ZUT DE NA4G/Bob UP

Date: Thu, 23 Jan 1997 14:44:27 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
To: wmcshan@rex.re.uokhsc.edu
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com
Subject: Re: Which HB?
Message-ID: <9701231944.AA129621@csemail.cropsci.ncsu.edu>

>
> I have the opportunity to get a copy of either the 1958, 1960, or 1965 ARRL
> Handbook...any thoughts out there about which is the best for glowenbuggen
> ideas/circuits?
>

I would stick to the 58 or 60 volume, since by 65 some of the stuff was
beginning ta lose it's smoke an' glow!

Those are all good years, though. For my collection, I try to find a
volume every 5 years or so. That gives you a good spread and the
technology changes significantly every 5 or so years. After 1979, well,
it lost its glow and smokeo.

Bob/NA4G

Date: Thu, 23 Jan 1997 11:20:47 -0700
From: jeffd@coriolis.com (Jeff Duntemann)
To: wmcshan@REX.RE.uokhsc.edu
Cc: glowbugs@theporch.com
Subject: Re: Which HB?
Message-ID: <1.5.4.32.19970123111408.00fa9164@165.247.88.2>

>I have the opportunity to get a copy of either the 1958, 1960, or 1965 ARRL
>Handbook...any thoughts out there about which is the best for glowenbuggen

>ideas/circuits?

Egad, man, get 'em all! But if I had to choose one it would be the 1960 edition. 1965 is starting to slide toward solid state, and I have not seen the 1958 edition and have no opinion on it. (I keep Handbooks from every five years, plus any that fall into my hands, so I know the 0's and the 5's very well but not all of those in between.)

But realistically, ANY handbook prior to '66 or '67 is a goldmine. Nail as many as you can afford.

--73--

--Jeff Duntemann KG7JF
Scottsdale, Arizona

Date: Thu, 23 Jan 1997 14:19:07 -0400 (EDT)
From: "James C. Owen, III" <owen@apollo.eeel.nist.gov>
To: glowbugs@theporch.com
Subject: RE: Which HB?
Message-ID: <51549.owen@apollo.eeel.nist.gov>

In message Thu, 23 Jan 1997 12:03:38 -0600 (CST),
wmcshan@rex.re.uokhsc.edu (Mike McShan) writes:

> Hi,
>
> I have the opportunity to get a copy of either the 1958, 1960, or 1965
> ARRL Handbook...any thoughts out there about which is the best for
> glowenbuggen ideas/circuits?
>
Any of these are good. Generally the older the better. As you get into the '70s you get less tube and more ss. 73 Jim K4CGY

Date: Thu, 23 Jan 1997 11:32:38 -0700
From: jeffd@coriolis.com (Jeff Duntemann)
To: glowbugs@theporch.com
Subject: Wee-Ceiver
Message-ID: <1.5.4.32.19970123112559.00fb1c60@165.247.88.2>

Bob mentioned the Wee-Ceiver, which was published in CQ Magazine in the mid-Sixties. I built it many years ago, and it worked tolerably well on

strong stations like WWV and SWBC but suffered on low level signals, probably due to its not having an audio stage, or maybe my cans were pure tin. Hard to tell; that was 1975. It was in a Sucrets box, which is probably identical to today's Altoids box. (Curiously Selective?)

Maybe it's heresy but there was a passing tradition of "hybrid" receivers in the Sixties, typically a tube detector followed by a single-transistor audio stage powered by the same 1.5v or 3v supply that lit the tube. Such a hybrid could fit into an Altoids box in style, especially if you're using one of those subminiature tubes. (I have a couple of them but have never tried using them.) For true period effect try to find a period transistor like a 2N107 or a CK722.

Just a suggestion; it seems somehow oddly appropriate to put a subminiature tube in the same can with one of its younger and less vacuous buddies. If anybody does one of these please post the circuit, since it's something I'd like to try someday. But on its own, I do NOT recommend the Wee-Ceiver as a ham radio receiver, tho it worked fine on the BBC. (Ditto the receiver in Alfred Morgan's BOY'S FIRST BOOK OF RADIO AND ELECTRONICS, which I also built and still have lying around somewhere.)

--73--

--Jeff Duntemann KG7JF
Scottsdale, Arizona

End of GLOWBUGS Digest 424
